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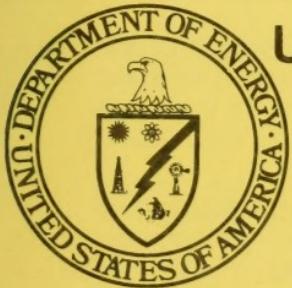
**Monthly
Performance
Report**



SADDLE HILL TRUST

LOT 36

MAY 1979



U.S. Department of Energy

**National Solar Heating and
Cooling Demonstration Program**

National Solar Data Program

NOTICE

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MONTHLY PERFORMANCE REPORT

SADDLE HILL TRUST
LOT 36

MAY 1979

I. SYSTEM DESCRIPTION

Saddle Hill Trust Lot 36 is a single-family residence in Medway, Massachusetts. Solar energy is used for space heating the home and preheating domestic hot water (DHW). The system has an array of flat-plate collectors with a gross area of 315 square feet. The array faces south at an angle of 58 degrees to the horizontal. A 60 percent glycerol solution is the transfer medium that delivers solar energy from the collector array to storage; water is the transfer medium that delivers solar energy from storage to the space heating and hot water loads. Solar energy is stored in the basement in a 750-gallon storage tank. The tank is made of steel and lined with polyurethane. Preheated city water is supplied, on demand, to a conventional 80-gallon DHW tank. When solar energy is insufficient to satisfy the space heating load, an oil furnace provides auxiliary energy for space heating. Similarly, a conventional electric 80-gallon DHW heater provides auxiliary energy for water heating. The system, shown schematically in Figure 1, has three modes of solar operation.

Mode 1 - Collector-to-Storage: This mode activates when the collector temperature is either more than 40°F higher than storage temperature or higher than 150°F. Pump P1 is on. Solar energy transfer takes place through a heat exchanger located inside the storage tank.

Mode 2 - Storage-to-Space Heating: This mode activates when there is a demand for space heating, storage temperature is 70°F or higher, and house temperature is lower than storage temperature. Pump P3 is on. Solar energy transfer takes place through a heat exchanger located inside the air duct.

Mode 3 - Storage-to-DHW Tank: This mode activates when storage water is 5°F higher than water in the DHW tank. Pump P2 is on. Solar energy transfer takes place through a heat exchanger located inside the DHW heater.

☈ 1001 COLLECTOR PLANE TOTAL INSOLATION
 ▽ T1001 OUTDOOR TEMPERATURE
 ▷ T600 INDOOR TEMPERATURE

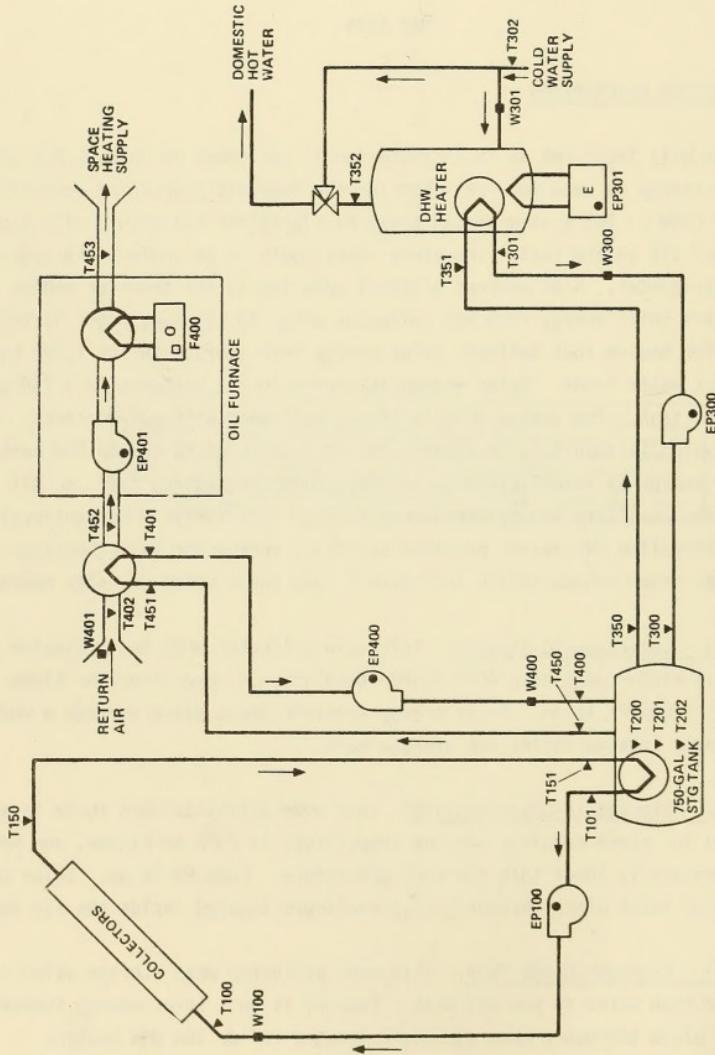


Figure 1. SADDLE HILL TRUST, LOT NO. 36, SOLAR ENERGY SYSTEM SCHEMATIC

II. PERFORMANCE EVALUATION

INTRODUCTION

The site was occupied in May and the solar energy system operated continuously during the month. Total solar energy collected was 4.0 million Btu and the total solar energy used was 3.0 million Btu or 75 percent of the collected energy. Stored energy increased by 0.044 million Btu and storage losses amounted to 0.92 million Btu. Solar energy satisfied 84 percent of the DHW requirements and 58 percent of the space heating requirements. The solar energy system provided an electrical energy savings of 2.7 million Btu and a fossil fuel energy savings of 0.072 million Btu.

WEATHER CONDITIONS

During the month, total incident solar energy on the collector array was 11.6 million Btu for a daily average of 1186 Btu per square foot. This was below the estimated average daily solar radiation for this geographical area during May of 1274 Btu per square foot for a south-facing plane with a tilt of 58 degrees to the horizontal. The average ambient temperature during May was 61°F as compared with the long-term average for May of 59°F. The number of heating degree-days for the month (based on a 65°F reference) was 165, as compared with the long-term average of 218. The number of cooling degree-days was 41, as compared with the average of 20.

THERMAL PERFORMANCE

System - During May the solar energy system performed approximately the same as expected. The expected performance was determined from a modified f-chart analysis using measured weather and subsystem loads as input. Solar energy used by the system was estimated by assuming that all energy collected would

be applied to the load. Actual solar energy used was 3.0 million Btu versus an estimated 3.2 million Btu. System total solar fraction was 83 percent versus an estimated 88 percent.

Collector - The total incident solar radiation on the collector array for the month of May was 11.6 million Btu. During the period the collector loop was operating, the total insolation amounted to 8.3 million Btu. The total collected solar energy for the month of May was 4.0 million Btu, resulting in a collector array efficiency of 34 percent, based on total incident insolation. Solar energy delivered from the collector array to storage was 4.0 million Btu. Operating energy required by the collector loop was 0.10 million Btu.

Storage - Solar energy delivered to storage was 4.0 million Btu. There were 3.0 million Btu delivered from storage to the DHW and space heating subsystems. Energy loss from storage was 0.92 million Btu. This loss represented 23 percent of the energy delivered to storage. The storage efficiency was 77 percent: This is calculated as the ratio of the sum of the energy removed from storage and the change in stored energy, to the energy delivered to storage. The average storage temperature for the month was 137°F.

DHW Load - The DHW subsystem consumed 3.0 million Btu of solar energy and 0.53 million Btu of auxiliary electrical energy to satisfy a hot water load of 1.4 million Btu. The solar fraction of this load was 84 percent. Losses from the DHW subsystem were 2.1 million Btu. The DHW subsystem consumed a total of 0.18 million Btu of operating energy, resulting in an electrical energy savings of 2.8 million Btu. A daily average of 60 gallons of DHW was consumed at an average temperature of 144°F delivered from the tank.

Space Heating Load - The space heating subsystem consumed 0.04 million Btu of solar energy and 0.51 million Btu of auxiliary fossil fuel energy to satisfy a space heating load of 0.74 million Btu. The solar fraction of this load was 58 percent. The space heating subsystem consumed a total of 0.02 million Btu of operating energy, resulting in a fossil fuel energy savings of 0.07 million Btu.

OBSERVATIONS

Adjustments were made to the DHW control system on May 24 to improve pump regulation and reduce power consumption.

ENERGY SAVINGS

The solar energy system provided an electrical energy savings of 2.7 million Btu and a fossil fuel energy savings of 0.072 million Btu. The DHW subsystem provided an electrical energy savings of 2.8 million Btu. The space heating subsystem contributed a fossil fuel energy savings of 0.072 million Btu.

III. ACTION STATUS

No items pending.

SOLAR HEATING AND COOLING DEMONSTRATION PROGRAM
 MONTHLY REPORT
 SITE SUMMARY

SITE: SADDLE HILL TRUST LOT 36, MEDWAY, MA
 REPORT PERIOD: MAY, 1979

SITE/SYSTEM DESCRIPTION:

THE SADDLE HILL TRUST LOT #36 SOLAR ENERGY SYSTEM PROVIDES SPACE HEATING AND HOT WATER FOR A SINGLE FAMILY RESIDENCE. THE COLLECTOR IS A 14 PANEL LIQUID COLLECTOR. STORAGE IS A 750 GALLON WATER TANK LOCATED IN THE BASEMENT. AUXILIARY HEATING IS PROVIDED BY AN OIL FURNACE AND AUXILIARY HOT WATER BY AN ELECTRIC DOMESTIC HOT WATER HEATER.

GENERAL SITE DATA:

INCIDENT SOLAR ENERGY

COLLECTED SOLAR ENERGY

	AVERAGE AMBIENT TEMPERATURE	AVERAGE BUILDING TEMPERATURE	AVERAGE SOLAR CONVERSION EFFICIENCY	EXCESS OPERATING ENERGY	TOTAL SYSTEM OPERATING ENERGY	TOTAL ENERGY CONSUMED
LOAD	70° F	70° F	65%	0.000	0.000	0.000
SOLAR FRACTION	0.042	0.042	0.043	0.043	0.043	0.043
SOLAR ENERGY USED	84	84	0.019	0.019	0.019	0.019
OPERATING ENERGY	3.006	3.006	0.031	0.031	0.031	0.031
AUX. THERMAL ENERGY	0.175	0.175	0.527	0.527	0.527	0.527
AUX. ELECTRIC FUEL	0.527	0.527	N.A.	N.A.	N.A.	N.A.
AUX. FOSSIL FUEL	N.A.	N.A.	0.051*	0.051*	0.051*	0.051*
ELECTRICAL SAVINGS	2.831	2.831	-0.000	-0.000	-0.000	-0.000
FOSSIL SAVINGS	N.A.	N.A.	0.072	0.072	0.072	0.072

SUBSYSTEM SUMMARY:

HOT WATER

HEATING

COOLING

WATER

SYSTEM PERFORMANCE FACTOR:
 * DENOTES UNAVAILABLE DATA
 @ DENOTES NULL DATA
 N.A. DENOTES NOT APPLICABLE DATA
 REFERENCE: USER'S GUIDE TO THE MONTHLY PERFORMANCE REPORT
 OF THE NATIONAL SOLAR DATA PROGRAM, FEBRUARY 28, 1978,
 SOLAR/0004-7A/18

SOLAR HEATING AND COOLING DEMONSTRATION PROGRAM

MONTHLY REPORT
SITE SUMMARYSITE: SADDLE HILL TRUST LOT 36, MEDWAY, MA
REPORT PERIOD: MAY, 1979

SITE/SYSTEM DESCRIPTION:

THE SADDLE HILL TRUST LOT #36 SOLAR ENERGY SYSTEM PROVIDES SPACE HEATING AND HOT WATER FOR A SINGLE FAMILY RESIDENCE. THE COLLECTOR IS A 14' X 14' PANEL LIQUID COOLANT. STORAGE IS A 750 GALLON WATER TANK LOCATED IN THE BASEMENT. AUXILIARY HEATING IS PROVIDED BY AN OIL FURNACE AND AUXILIARY HOT WATER BY AN ELECTRIC DOMESTIC HOT WATER HEATER.

GENERAL SITE DATA:

INCIDENT SOLAR ENERGY
COLLECTED SOLAR ENERGY

AVERAGE AMBIENT TEMPERATURE	BUILDING TEMPERATURE	ECCSS SOLAR CONVERSION EFFICIENCY	ECSS OPERATING ENERGY	TOTAL SYSTEM OPERATING ENERGY

SUBSYSTEM SUMMARY:

HOT WATER LOAD	HOT WATER FRACTION	SOLAR ENERGY USED	OPERATING ENERGY	AUX. THERMAL ENG.	AUX. ELECTRIC ENG.	FOSSTIL FUELS	ECSS ELECTRICAL SAVINGS	FOSSTIL SAVINGS
1.0522	0.84	3.0171	0.0185	0.0556	0.0556	N.A.	2.986	N.A.
0.078	0.58	0.046	0.020	0.033	N.A.*	0.054	-0.000	0.076

SYSTEM PERFORMANCE FACTOR:

* DENOTES UNAVAILABLE DATA
 @ DENOTES NULL DATA
 N.A. DENOTES NOT APPLICABLE DATA

REFERENCE: USER'S GUIDE TO THE MONTHLY PERFORMANCE REPORT
OF THE NATIONAL SOLAR DATA PROGRAM, FEBRUARY 28, 1978,
SOLAR/0004-78/18

SCLAR HEATING AND COOLING DEMONSTRATION PROGRAM

ENERGY COLLECTION AND STORAGE SUBSYSTEM (ECSS)

SITE: SADDLE HILL TRUST LOT 36, MEDWAY, MA
 REPORT PERIOD: MAY, 1979

SOLAR / 1024-79/05

DAY OF MONTH	INCIDENT SOLAR ENERGY MILLION BTU	AMBIENT TEMP DEG-F	ENERGY TC LOADS MILLION BTU	AUX THERMAL TO ECSS MILLION BTU	ECSS OPERATING ENERGY MILLION BTU	ECSS SOLAR CONVERSION EFFICIENCY	
						ECSS ENERGY REJECTED MILLION BTU	N
1	0.528	57	0.124	0	0.004	0	0.234
2	0.648	52	0.129	0	0.005	0	0.200
3	0.491	55	0.190	0	0.004	0	0.387
4	0.490	61	0.142	0	0.005	0	0.291
5	0.654	54	0.115	A	0.005	0	0.176
6	0.527	53	0.205	P	0.002	0	0.388
7	0.612	62	0.142	P	0.005	0	0.186
8	0.587	67	0.142	L	0.005	0	0.242
9	0.557	77	0.135	C	0.005	0	0.278
10	0.534	81	0.149	A	0.004	0	0.221
11	0.577	69	0.127	B	0.000	0	0.270
12	0.214	62	0.058	E	0.000	0	0.454
13	0.133	63	0.060		0.000	0	0.885
14	0.091	61	0.055		0.000	0	0.201
15	0.094	60	0.083		0.006	0	0.247
16	0.462	65	0.093		0.006	0	0.407
17	0.463	60	0.115		0.002	0	0.339
18	0.213	58	0.087		0.000	0	0.551
19	0.120	53	0.041		0.000	0	0.234
20	0.121	56	0.067		0.000	0	0.155
21	0.303	66	0.071		0.007	0	0.045
22	0.591	65	0.079		0.000	0	0.308
23	0.133	56	0.057		0.001	0	0.250
24	0.054	52	0.034		0.003	0	0.092
25	0.114	56	0.053		0.000	0	0.349
26	0.211	57	0.047		0.000	0	0.204
27	0.514	60	0.036		0.000	0	0.675
28	0.102	59	0.128		0.008	0	0.160
29	0.628	58	0.065		0.000	0	0.263
30	0.102	68	0.115		0.007	0	N 111
31	0.718					Q102	
SUM	11.581	-	3.049	N.A.	0.100	N.A.	
Avg	0.374	61	0.098	N.A.	0.003	N.A.	
NBS ID	Q001	N113					

* DENOTES UNAVAILABLE DATA.

@ DENOTES NULL DATA.

N.A. DENOTES NOT APPLICABLE DATA.

SOLAR HEATING AND COOLING DEMONSTRATION PROGRAM

MONTHLY REPORT
COLLECTOR ARRAY PERFORMANCESITE: SADDLE HILL TRUST LOT 36, MEDWAY, MA
REPORT PERIOD: MAY, 1979

SOLARR/1024-79/05

DAY OF MONTH	INCIDENT SOLAR ENERGY MILLION BTU	OPERATIONAL INCIDENT ENERGY MILLION BTU		COLLECTED SOLAR ENERGY MILLION BTU	COLLECTED SOLAR ENERGY MILLION BTU	DAYTIME AMBIENT TEMP. DEG F	COLLECTOR ARRAY EFFICIENCY
		INCIDENT ENERGY MILLION BTU	INCIDENT ENERGY MILLION BTU				
1	0.528	0.398	0.197	65	65	65	0.373
2	0.648	0.532	0.250	68	68	68	0.386
3	0.491	0.386	0.183	69	69	69	0.373
4	0.490	0.368	0.157	68	68	68	0.321
5	0.654	0.531	0.251	68	68	68	0.384
6	0.527	0.400	0.166	69	69	69	0.353
7	0.612	0.499	0.246	70	70	70	0.403
8	0.587	0.465	0.219	81	81	81	0.373
9	0.557	0.437	0.174	88	88	88	0.348
10	0.534	0.394	0.181	89	89	89	0.339
11	0.577	0.442	0.197	79	79	79	0.342
12	0.214	0.000	0.000	71	71	71	0.000
13	0.133	0.000	0.000	67	67	67	0.000
14	0.091	0.000	0.000	63	63	63	0.000
15	0.094	0.000	0.000	61	61	61	0.000
16	0.462	0.380	0.177	60	60	60	0.383
17	0.463	0.370	0.170	70	70	70	0.366
18	0.213	0.119	0.045	61	61	61	0.209
19	0.120	0.000	0.000	58	58	58	0.000
20	0.121	0.000	0.000	58	58	58	0.000
21	0.303	0.266	0.118	*	*	*	0.388
22	0.591	0.525	0.278	72	72	72	0.469
23	0.133	0.001	0.000	64	64	64	0.002
24	0.054	0.000	0.000	53	53	53	0.001
25	0.111	0.032	0.019	59	59	59	0.170
26	0.211	0.128	0.058	59	59	59	0.275
27	0.514	0.431	0.208	67	67	67	0.405
28	0.102	0.000	0.000	61	61	61	0.001
29	0.628	0.596	0.208	76	76	76	0.490
30	0.102	0.000	0.000	61	61	61	0.001
31	0.718	0.635	0.320	73	73	73	0.445
SUM	11.581	8.336	3.962	-	-	-	-
Avg	0.374	0.269	0.128	67	67	67	0.347
NBS ID	Q001	Q100	Q100	N10C	N10C	N10C	N10C

* DENOTES UNAVAILABLE DATA.

@ DENOTES NULL DATA.

N.A. DENOTES NOT APPLICABLE DATA.

SOLAR HEATING AND COOLING DEMONSTRATION PROGRAM

MONTHLY REPORT
STORAGE PERFORMANCESTATE: SADDLE HILL TRUST LOT 36, MEDWAY, MA
REPORT PERIOD: MAY, 1970

SOLAR/1024-79/05

DAY OF MONTH	ENERGY TO STORAGE MILLION BTU	ENERGY FROM STORAGE MILLION BTU	CHANGE IN STORED ENERGY MILLION BTU	STORAGE AVG TEMP DEG F	STORAGE EFFICIENCY
				142	0.836
1	0.190	0.124	0.035	151	0.798
2	0.254	0.129	0.033	157	0.858
3	0.183	0.190	-0.015	151	0.784
4	0.162	0.142	-0.015	156	0.740
5	0.245	0.115	-0.035	158	0.884
6	0.288	0.205	-0.088	159	0.763
7	0.229	0.144	-0.086	166	0.747
8	0.210	0.142	-0.068	169	0.728
9	0.198	0.135	-0.063	169	0.786
10	0.184	0.149	-0.065	170	0.747
11	0.190	0.127	-0.063	164	1.000
12	0.000	0.058	-0.092	150	1.000
13	0.000	0.060	-0.073	137	1.000
14	0.000	0.055	-0.088	124	1.000
15	0.000	0.083	-0.076	123	0.763
16	0.190	0.093	-0.052	128	0.887
17	0.171	0.115	-0.037	125	0.873
18	0.048	0.087	-0.045	119	1.000
19	0.000	0.041	-0.046	119	1.000
20	0.000	0.067	-0.061	119	1.000
21	0.212	0.071	-0.016	107	0.660
22	0.288	0.091	-0.146	122	0.826
23	0.000	0.079	-0.074	126	27.061
24	0.000	0.057	-0.052	116	9.885
25	0.015	0.057	-0.028	108	0.441
26	0.060	0.053	-0.006	106	0.786
27	0.216	0.047	-0.120	117	0.776
28	0.000	0.036	-0.061	122	-11.295
29	0.322	0.128	-0.098	127	0.704
30	0.000	0.069	-0.066	124	7.726
31	0.331	0.115	-0.145	123	0.782
SUM	4.013	3.049	0.044	-	-
Avg	0.129	0.098	C. 001	137	0.771
NBS 10	Q200	C201	Q202	N108	-

* DENOTES UNAVAILABLE DATA.

N/A - DENOTES UNLAWFUL DATA.
N/A - DENOTES NOT APPLICABLE DATA.

SOLAR HEATING AND COOLING DEMONSTRATION PROGRAM

MONTHLY REPORT
HOT WATER SUBSYSTEMSITE: SADDLE HILL TRUST LOT 36, MEDWAY, MA
REPORT PERIOD: MAY, 1979

SOLAR/1024-79/05

DAY OF MON.	HOT WATER LOAD MILLION BTU	SOLAR ENERGY USED MILLION BTU	OPER. ENERGY MILLION BTU	AUX. THERMAL USED MILLION BTU	AUX. ELECT. FUEL MILLION BTU	AUX. FOSSIL FUEL MILLION BTU	FOSSIL ENERGY SAVINGS MILLION BTU		SUP. HOT WAT. TEMP. DEG F	HOT WAT. TEMP. DEG F	WATER USED GAL
							HOT	WAT.			
1	0.055	87	0.124	0.006	0.006	0.006	N.D.	0.118	133	72	
2	0.048	99	0.182	0.006	0.003	0.003	N.C.	0.123	143	61	
3	0.109	100	0.142	0.006	0.000	0.000	C.T.	0.176	152	125	
4	0.063	100	0.115	0.006	0.000	0.000	A.P.	0.136	145	182	
5	0.056	100	0.169	0.006	0.000	0.000	A.P.	0.109	145	69	
6	0.091	100	0.14	0.006	0.000	0.000	P.L.	0.163	154	108	
7	0.038	100	0.142	0.006	0.000	0.000	P.L.	0.107	154	44	
8	0.044	100	0.135	0.006	0.000	0.000	P.L.	0.129	156	49	
9	0.035	100	0.149	0.006	0.000	0.000	C.A.B.	0.143	157	39	
10	0.041	100	0.127	0.006	0.000	0.000	C.A.B.	0.121	163	45	
11	0.041	100	0.058	0.006	0.000	0.000	C.A.B.	0.052	163	45	
12	0.032	100	0.06	0.006	0.000	0.000	C.A.B.	0.055	159	40	
13	0.058	98	0.095	0.006	0.000	0.000	C.A.B.	0.089	128	66	
14	0.036	82	0.083	0.006	0.006	0.026	C.E.	0.077	138	56	
15	0.047	76	0.093	0.006	0.030	0.030	C.E.	0.087	142	53	
16	0.040	76	0.115	0.006	0.030	0.030	C.E.	0.128	142	67	
17	0.033	78	0.087	0.007	0.025	0.025	F.E.	0.145	145	45	
18	0.020	69	0.041	0.006	0.019	0.019	F.E.	0.080	142	57	
19	0.040	62	0.067	0.006	0.019	0.019	F.E.	0.034	142	54	
20	0.046	58	0.071	0.007	0.050	0.046	F.E.	0.060	142	53	
21	0.046	67	0.091	0.007	0.029	0.029	F.E.	0.064	137	62	
22	0.055	78	0.079	0.007	0.026	0.026	F.E.	0.085	140	75	
23	0.049	67	0.057	0.005	0.033	0.024	F.E.	0.072	140	75	
24	0.053	67	0.034	0.005	0.039	0.039	F.E.	0.052	138	66	
25	0.043	54	0.053	0.004	0.028	0.035	F.E.	0.032	139	73	
26	0.043	54	0.047	0.004	0.028	0.028	F.E.	0.043	125	46	
27	0.015	55	0.036	0.002	0.022	0.022	F.E.	0.034	129	20	
28	0.060	69	0.128	0.006	0.028	0.028	F.E.	0.125	144	80	
29	0.030	73	0.069	0.004	0.031	0.031	F.E.	0.065	142	41	
30	0.042	84	0.115	0.006	0.016	0.016	F.E.	0.108	142	60	
31	0.042	84	0.115	0.006	0.016	0.016	F.E.	0.142	142	60	
SUM	1.442	-	3.006	0.175	0.527	0.527	N.A.	2.831	N.A.	-	1851
AVG	0.047	84	0.097	0.006	0.017	0.017	N.A.	0.091	N.A.	57	144
NBS	Q302	N300	Q300	Q303	Q301	Q305	Q306	Q311	Q313	N305	N308

* DENOTES UNAVAILABLE DATA.

@ DENOTES NULL DATA.

N.A. DENOTES NOT APPLICABLE DATA.

SOLAR HEATING AND COOLING DEMONSTRATION PROGRAM

SPACE MONTHLY REPORT
SPACE HEATING SUBSYSTEMSITE: SADDLE HILL TRUST LOT 36, MEDWAY, MA
REPORT PERIOD: MAY 1976

DAY	SPACE HEATING LOAD BTU	SOLAR F/R OF LOAD PCT	SOLAR ENERGY USED MILLION BTU	OPER ENERGY MILLION BTU	AUX THERMAL USED MILLION BTU	AUX FUEL MILLION BTU	BLDG AMR TEMP DEG. F		FOSSIL ENERGY SAVINGS MILLION BTU	ELECT ENERGY SAVINGS MILLION BTU	FOSSIL ENERGY SAVINGS MILLION BTU	ELECT ENERGY SAVINGS MILLION BTU
							N	O				
1	0	0	0	0.000	0.000	0.000	70	70	0.000	0.000	0.000	0.000
2	100	0.008	0.008	0.000	0.004	0.000	52	67	-	-	-	-
3	0	0	0	0.000	0.000	0.000	55	67	-	-	-	-
4	0	0	0	0.000	0.000	0.000	61	71	-	-	-	-
5	53	0.066	0.035	0.000	0.016	0.031	54	71	-	-	-	-
6	0	0	0	0.000	0.000	0.000	53	62	-	-	-	-
7	0	0	0	0.000	0.000	0.000	62	71	-	-	-	-
8	0	0	0	0.000	0.000	0.000	62	71	-	-	-	-
9	0	0	0	0.000	0.000	0.000	62	71	-	-	-	-
10	0	0	0	0.000	0.000	0.000	63	71	-	-	-	-
11	0	0	0	0.000	0.000	0.000	69	77	-	-	-	-
12	0	0	0	0.000	0.000	0.000	69	77	-	-	-	-
13	0	0	0	0.000	0.000	0.000	63	73	-	-	-	-
14	0	0	0	0.000	0.000	0.000	63	74	-	-	-	-
15	0	0	0	0.000	0.000	0.000	61	73	-	-	-	-
16	0	0	0	0.000	0.000	0.000	61	70	-	-	-	-
17	0	0	0	0.000	0.000	0.000	65	74	-	-	-	-
18	0	0	0	0.000	0.000	0.000	58	70	-	-	-	-
19	0	0	0	0.000	0.000	0.000	68	70	-	-	-	-
20	0	0	0	0.000	0.000	0.000	53	67	-	-	-	-
21	0	0	0	0.000	0.000	0.000	57	67	-	-	-	-
22	0	0	0	0.000	0.000	0.000	56	72	-	-	-	-
23	0	0	0	0.000	0.000	0.000	56	69	-	-	-	-
24	0	0	0	0.000	0.000	0.000	52	69	-	-	-	-
25	0	0	0	0.000	0.000	0.000	56	67	-	-	-	-
26	0	0	0	0.000	0.000	0.000	57	67	-	-	-	-
27	0	0	0	0.000	0.000	0.000	59	67	-	-	-	-
28	0	0	0	0.000	0.000	0.000	68	71	-	-	-	-
29	0	0	0	0.000	0.000	0.000	58	71	-	-	-	-
30	0	0	0	0.000	0.000	0.000	68	71	-	-	-	-
31	0	0	0	0.000	0.000	0.000	68	72	-	-	-	-
SUM	0.074	-	-	0.043	-	0.019	-	N.A.	0.051	-	0.072	-
Avg	0.002	58	0.001	0.001	-	-	N.A.	0.002	-	0.002	71	61
NBS	Q402	N400	Q400	Q403	-	-	N.A.	Q410	-	Q415	Q417	N406

* DENOTES UNAVAILABLE DATA.
@ DENOTES NULL DATA.
N.A. DENOTES NOT APPLICABLE DATA.

SOLAR HEATING AND COOLING DEMONSTRATION PROGRAM

MONTHLY REPORT
SPACE COOLING SUBSYSTEM

SITE: SADDLE HILL TRUST LOT 36,
REPORT PERIOD: MAY, 1979

	DAY OF MON.	SPACED COOLING LOAD MILLION BTU	SOLAR FRACTION LOAD PCT	SOLAR ENERGY USED MILLION BTU	AUX THERMAL USED MILLION BTU	AUX ELECT FUEL MILLION BTU	AUXIL FOSSIL FUEL MILLION BTU	ELECT ENERGY SAVINGS MILLION BTU	FOSIL ENERGY SAVINGS MILLION BTU	BLDG DWP TEMP DEG F	AMB TEMP DEG F	BLDG TEMP DEG F	AMB TEMP DEG F	BLDG DWP TEMP DEG F	AMB TEMP DEG F	BLDG DWP TEMP DEG F	AMB TEMP DEG F	BLDG DWP TEMP DEG F
1	1	NOT	APP	LT	C	A	B	JUL	NOT	70	57	70	57	NOT	70	57	70	57
2	2	NOT	APP	LT	C	A	B	JUL	NOT	67	55	71	64	NOT	67	55	71	64
3	3	NOT	APP	LT	C	A	B	JUL	NOT	64	54	71	62	NOT	64	54	71	62
4	4	NOT	APP	LT	C	A	B	JUL	NOT	62	53	71	60	NOT	62	53	71	60
5	5	NOT	APP	LT	C	A	B	JUL	NOT	60	53	71	59	NOT	60	53	71	59
6	6	NOT	APP	LT	C	A	B	JUL	NOT	59	53	71	58	NOT	59	53	71	58
7	7	NOT	APP	LT	C	A	B	JUL	NOT	58	53	71	57	NOT	58	53	71	57
8	8	NOT	APP	LT	C	A	B	JUL	NOT	57	53	71	56	NOT	57	53	71	56
9	9	NOT	APP	LT	C	A	B	JUL	NOT	56	53	71	55	NOT	56	53	71	55
10	10	NOT	APP	LT	C	A	B	JUL	NOT	55	53	71	55	NOT	55	53	71	55
11	11	NOT	APP	LT	C	A	B	JUL	NOT	54	53	71	54	NOT	54	53	71	54
12	12	NOT	APP	LT	C	A	B	JUL	NOT	53	53	71	53	NOT	53	53	71	53
13	13	NOT	APP	LT	C	A	B	JUL	NOT	52	53	71	52	NOT	52	53	71	52
14	14	NOT	APP	LT	C	A	B	JUL	NOT	51	53	71	51	NOT	51	53	71	51
15	15	NOT	APP	LT	C	A	B	JUL	NOT	50	53	71	50	NOT	50	53	71	50
16	16	NOT	APP	LT	C	A	B	JUL	NOT	49	53	71	49	NOT	49	53	71	49
17	17	NOT	APP	LT	C	A	B	JUL	NOT	48	53	71	48	NOT	48	53	71	48
18	18	NOT	APP	LT	C	A	B	JUL	NOT	47	53	71	47	NOT	47	53	71	47
19	19	NOT	APP	LT	C	A	B	JUL	NOT	46	53	71	46	NOT	46	53	71	46
20	20	NOT	APP	LT	C	A	B	JUL	NOT	45	53	71	45	NOT	45	53	71	45
21	21	NOT	APP	LT	C	A	B	JUL	NOT	44	53	71	44	NOT	44	53	71	44
22	22	NOT	APP	LT	C	A	B	JUL	NOT	43	53	71	43	NOT	43	53	71	43
23	23	NOT	APP	LT	C	A	B	JUL	NOT	42	53	71	42	NOT	42	53	71	42
24	24	NOT	APP	LT	C	A	B	JUL	NOT	41	53	71	41	NOT	41	53	71	41
25	25	NOT	APP	LT	C	A	B	JUL	NOT	40	53	71	40	NOT	40	53	71	40
26	26	NOT	APP	LT	C	A	B	JUL	NOT	39	53	71	39	NOT	39	53	71	39
27	27	NOT	APP	LT	C	A	B	JUL	NOT	38	53	71	38	NOT	38	53	71	38
28	28	NOT	APP	LT	C	A	B	JUL	NOT	37	53	71	37	NOT	37	53	71	37
29	29	NOT	APP	LT	C	A	B	JUL	NOT	36	53	71	36	NOT	36	53	71	36
30	30	NOT	APP	LT	C	A	B	JUL	NOT	35	53	71	35	NOT	35	53	71	35
31	31	NOT	APP	LT	C	A	B	JUL	NOT	34	53	71	34	NOT	34	53	71	34
SUM		NOT	APP	LT	C	A	B	JUL	NOT	33	53	71	33	NOT	33	53	71	33
Avg		NOT	APP	LT	C	A	B	JUL	NOT	32	53	71	32	NOT	32	53	71	32
NBS		NOT	APP	LT	C	A	B	JUL	NOT	31	53	71	31	NOT	31	53	71	31

DENOTES INVALI DATE

UNAVAILABLE DATA

N.A. DENOTES NOT APPLICABLE DATA.

SOLAR HEATING AND COOLING DEMONSTRATION PROGRAM

MONTHLY REPORT
ENVIRONMENTAL SUMMARYSITE: SADDLE HILL TRUST LOT 36,
REPORT PERIOD: MAY, 1979, MEDWAY, MA

SOLAP / 1024-79/05

DAY OF MONTH	TOTAL IN SOLA- TION BTU/SQ. FT	DIFFUSE IN SOLA- TION BTU/SQ. FT	AMBIENT TEMP DEG F	RELATIVE HUMIDITY PERCENT	WIND DIRECTION DEGREES	WIND SPEED M.P.H.					
							N	O	T	A	P
1	1675	N	57	65	N	-	-	-	-	-	-
2	2057	O	52	69	O	0	-	-	-	-	-
3	1559	T	55	68	T	0	-	-	-	-	-
4	1555	A	61	58	A	0	-	-	-	-	-
5	2075	P	54	59	P	0	-	-	-	-	-
6	1671	L	53	70	L	0	-	-	-	-	-
7	1942	I	62	81	I	0	-	-	-	-	-
8	1863	C	67	88	C	0	-	-	-	-	-
9	1769	A	77	99	A	0	-	-	-	-	-
10	1697	B	81	79	B	0	-	-	-	-	-
11	1831	E	69	71	E	0	-	-	-	-	-
12	680	L	62	71	L	0	-	-	-	-	-
13	422	E	63	67	E	0	-	-	-	-	-
14	287	E	61	63	E	0	-	-	-	-	-
15	145	F	60	61	F	0	-	-	-	-	-
16	297	F	65	69	F	0	-	-	-	-	-
17	1467	F	60	70	F	0	-	-	-	-	-
18	677	F	58	61	F	0	-	-	-	-	-
19	1471	F	53	58	F	0	-	-	-	-	-
20	381	F	66	58	F	0	-	-	-	-	-
21	384	F	65	72	F	0	-	-	-	-	-
22	962	F	56	64	F	0	-	-	-	-	-
23	1872	F	52	53	F	0	-	-	-	-	-
24	4222	F	56	59	F	0	-	-	-	-	-
25	172	F	57	59	F	0	-	-	-	-	-
26	353	F	60	67	F	0	-	-	-	-	-
27	669	F	59	61	F	0	-	-	-	-	-
28	1630	F	68	76	F	0	-	-	-	-	-
29	323	F	68	71	F	0	-	-	-	-	-
30	1992	F	68	73	F	0	-	-	-	-	-
31	323	F	68	73	F	0	-	-	-	-	-
	2281	F	68	73	F	0	-	-	-	-	-
SUM	36766	N.A.	-	-	N.A.	0	-	-	-	-	-
Avg	1186	N.A.	61	67	N.A.	0	-	-	-	-	-
NBS ID	Q001	N113	N115	N114	N.A.	0	-	-	-	-	-

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@ DENOTES NULL DATA.
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UNIVERSITY OF FLORIDA



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